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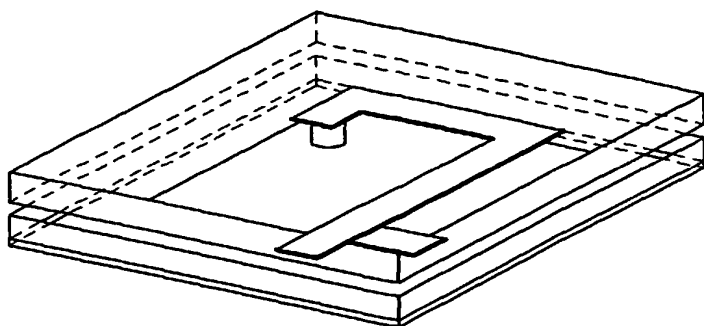
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(54) Title: MULTILAYER STACK WITH COMPENSATED RESONANT CIRCUIT



(57) Abstract: A metallization structure in a mul-
tilayer stack, which is arranged at a distance from a
ground electrode, is characterized in that the metal-
lization structure has a capacitor electrode and a line
that acts as a coil, where the capacitor electrode and
the line are arranged in a common plane which lies
parallel with the ground electrode at a distance h_1 ,
and in that formula (I) where w is the width of the
line.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 0131, no. 13 (E-729), 17 March 1989 (1989-03-17) & JP 63 284917 A (MURATA MFG CO LTD), 22 November 1988 (1988-11-22) abstract page 64, left-hand column, paragraphs 6,8	1,10
Y	US 4 728 911 A (SJOEGREN CARL T H) 1 March 1988 (1988-03-01) abstract column 2, line 29 - column 4, line 54	1,2,7,8, 10
Y	US 5 400 000 A (KASAHARA MASAHIRO ET AL) 21 March 1995 (1995-03-21) column 5, line 15 - column 7, line 37 column 7, lines 61-66	1,2,7,8, 10
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 592 134 A (HAYASHI YOSHIMASA ET AL) 7 January 1997 (1997-01-07) column 4, line 51 - column 6, line 56 -----	1,7,8,10
A	WO 03/017479 A (MATTERS-KAMMERER MARION K ; VAN ESCH HENRICUS A (NL); KONINKL PHILIPS) 27 February 2003 (2003-02-27) page 3, lines 19-24 page 8, lines 4-19 -----	1,7-9
A	US 6 448 873 B1 (MOSTOV ALEXANDER) 10 September 2002 (2002-09-10) column 6, line 41 - column 8, line 28 -----	1,9

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 63284917	A	22-11-1988	NONE	
US 4728911	A	01-03-1988	SE 449406 B DE 3670185 D1 EP 0214110 A1 ES 2001584 A6 JP 62049714 A SE 8503988 A	27-04-1987 10-05-1990 11-03-1987 01-06-1988 04-03-1987 28-02-1987
US 5400000	A	21-03-1995	JP 2730322 B2 JP 4306003 A JP 2884878 B2 JP 5191117 A JP 2884879 B2 JP 5191118 A DE 4203937 A1 DE 4203939 A1 DE 4203960 A1 DE 4203961 A1 JP 2730320 B2 JP 4306001 A JP 2730321 B2 JP 4306002 A JP 2730323 B2 JP 4306004 A JP 4306005 A US 5381117 A US 5382927 A US 5351020 A NL 9201014 A ,B, NL 9201015 A ,B,	25-03-1998 28-10-1992 19-04-1999 30-07-1993 19-04-1999 30-07-1993 27-08-1992 27-08-1992 27-08-1992 27-08-1992 25-03-1998 28-10-1992 25-03-1998 28-10-1992 25-03-1998 28-10-1992 28-10-1992 10-01-1995 17-01-1995 27-09-1994 04-01-1993 04-01-1993
US 5592134	A	07-01-1997	JP 7223860 A JP 7235447 A JP 7245241 A JP 7263282 A KR 205775 B1 KR 232547 B1	22-08-1995 05-09-1995 19-09-1995 13-10-1995 01-07-1999 15-03-2000
WO 03017479	A	27-02-2003	EP 1436893 A2 WO 03017479 A2 US 2004232519 A1	14-07-2004 27-02-2003 25-11-2004
US 6448873	B1	10-09-2002	US 6175727 B1 JP 11251145 A	16-01-2001 17-09-1999